

**STATEMENT OF BASIS**

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0020150; AI 31094; PER20100001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality  
Office of Environmental Services  
P. O. Box 4313  
Baton Rouge, Louisiana 70821-4313

- I. **THE APPLICANT IS:** City of Carencro  
Post Road Wastewater Treatment Plant  
P.O. Drawer 10  
Carencro, LA 70520
- II. **PREPARED BY:** Afton J. Bessix
- DATE PREPARED:** April 20, 2010
- III. **PERMIT ACTION:** reissue LPDES permit LA0020150, AI 31094; PER20100001
- LPDES application received: January 25, 2010
- EPA has not retained enforcement authority.  
LPDES permit issued: January 1, 2005  
LPDES permit expired: December 31, 2009

IV. **FACILITY INFORMATION:**

- A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the City of Carencro.
- B. The permit application does not indicate the receipt of industrial wastewater.
- C. The facility is located on Post Road, 0.7 miles northwest from intersection of LA Hwy 182 in Carencro, Lafayette Parish.
- D. The treatment facility consists of an oxidation pond, which flows into a clarifier and filter. Disinfection is by chlorination.

E. **Outfall 001**

Discharge Location: Latitude 30° 19' 45" North  
Longitude 92° 3' 21" West

Description: treated sanitary wastewater

Design Capacity: 0.50 MGD

Type of Flow Measurement which the facility is currently using:  
Combination Totalizing Meter / Continuous Recorder

## Statement of Basis

LA0020150; AI 31094; PER20100001

Page 2

**V. RECEIVING WATERS:**

The discharge is into an unnamed ditch; thence into an unnamed tributary; thence into the Vermilion River in subsegment 060801 of the Vermilion - Teche Basin.

The designated uses and degree of support for Segment 060801 of the Vermilion - Teche Basin are as indicated in the table below<sup>1/</sup>:

<b>Degree of Support of Each Use</b>						
Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Not Supported	Not Supported	Not Supported	N/A	N/A	N/A	Full

<sup>1/</sup>The designated uses and degree of support for Segment 060801 of the Vermilion - Teche Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

**VI. ENDANGERED SPECIES:**

The receiving waterbody, Subsegment 060801 of the Vermilion - Teche Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated January 5, 2010 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

**VII. HISTORIC SITES:**

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

**VIII. PUBLIC NOTICE:**

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

## Statement of Basis

LA0020150; AI 31094; PER20100001

Page 3

For additional information, contact:

Ms. Afton J. Bessix  
 Water Permits Division  
 Department of Environmental Quality  
 Office of Environmental Services  
 P. O. Box 4313  
 Baton Rouge, Louisiana 70821-4313

# **IX. PROPOSED PERMIT LIMITS:**

Subsegment 060801, Vermilion River-Headwaters to Bayou Fusilier-Bourbeaux junction to New Flanders (Ambassador Caffery) Bridge, LA Hwy. 3073, is not listed on LDEQ's Final 2006 303(d) List as impaired. However, subsegment 060801 was previously listed as impaired for phosphorus, nitrogen, organic enrichment/low DO, pathogen indicators, suspended solids/ turbidity/siltation, and carbofuran, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for subsegment 060801:

## 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen

This TMDL was finalized January 19, 2001 and established a loading capacity equal to the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen. This TMDL estimated the necessary reduction in nonpoint source loadings accelerate progress toward full support of the DO standard. Since the TMDL did not require reductions in point source loadings, no additional permit requirements are included. However, individual point sources in the Vermilion Watershed should continue to be issued on the basis of flow rates as follows:

### FLOW RATE

greater than 25,000 gpd

### PERMIT LIMITS

May – Dec.: 10 mg/l CBOD<sub>5</sub>/5 mg/l NH<sub>3</sub>-N/5 mg/l DO

Jan.- April: 20 mg/l CBOD<sub>5</sub>/10 mg/l NH<sub>3</sub>-N/5 mg/l DO

25,000 gpd or less

secondary limits year round

Additionally, in regard to nutrients such as nitrogen and phosphorous, LDEQ has determined that organic enrichment/DO directly correlates with overall nutrient impact. Thus, when organic enrichment/DO is limited (as with the established CBOD<sub>5</sub>/ NH<sub>3</sub>-N/ DO limits), LDEQ is also in effect limiting and controlling nutrient concentrations and impacts.

Therefore, this discharge will be permitted accordingly, and the permit maintains previously established limitations reflecting the above limits.

## TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin

As per the TMDL finalized May 3, 2001, "Point sources do not represent a significant source of TSS as defined in this TMDL. Point sources discharge primarily organic TSS, which does not contribute to habitat impairment resulting from sedimentation. Because the point sources are minor contributors and discharges of organic suspended solids from point sources are already addressed by LDEQ through there permitting of point sources to maintain water quality standards for DO, the wasteload allocations for point source contributions were set to zero."

## Statement of Basis

LA0020150; AI 31094; PER20100001

Page 4

Therefore, TSS limits are being maintained as previously established in this permit according to the current state water quality standards.

*Vermilion River TMDL for Fecal Coliform*

The *Vermilion River TMDL for Fecal Coliform* was finalized on April 5, 2001, addressing the presence of pathogen indicators in the watershed. As per this TMDL, "...there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL." Therefore, Fecal Coliform effluent limitations will remain as previously established in this permit.

*TMDL for the Pesticide Carbofuran in the Mermentau River and Vermilion-Teche River Basins*

The *TMDL for the Pesticide Carbofuran in the Mermentau River and Vermilion-Teche River Basins* was finalized on March 21, 2002 and states that "the one point source discharger, FMC Corporation's Agricultural Products Group Plant (FMC)... is the only known point source in the Vermilion-Teche Basin." As a result, the TMDL establishes a WLA for FMC only. Since this TMDL does not consider the City of Carencro to be a contributing source, no additional permit requirements are included.

*Vermilion River TMDL for Sulfate*

This TMDL was originally finalized on March 13, 2001 and established a specific WLA for the City of Carencro. Due to a subsequent change in criterion, this TMDL was withdrawn on June 28, 2005. Therefore, no additional permit limitations are required.

### Final Effluent Limits:

#### OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

	Monthly Avg. (lbs./day)	Monthl y Avg.	Weekly Avg.	Basis
CBOD <sub>5</sub>				
May – December	42	10 mg/l	15 mg/l	Limits are set in accordance with the 1999 <i>Review and Assessment of the 1987 Vermilion River Watershed TMDL for Oxygen</i> .
Jan. – April	83	20 mg/l	30 mg/l	
TSS				
May – December	63	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Jan. – April	83	20 mg/l	30 mg/l	
Ammonia-Nitrogen				
May – December	21	5 mg/l	10 mg/l	Limits are set in accordance with the 1999 <i>Review and Assessment of the 1987 Vermilion River Watershed TMDL for Oxygen</i> .
Jan. – April	42	10 mg/l	20 mg/l	
Dissolved Oxygen**	N/A	5 mg/l	N/A	Limits are set in accordance with the 1999 <i>Review and Assessment of the 1987 Vermilion River Watershed TMDL for Oxygen</i> .

\*\*This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

### Other Effluent Limitations:

#### 1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5., the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly

## Statement of Basis

LA0020150; AI 31094; PER20100001

Page 6

Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

**2) pH**

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

**3) Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

**X. PREVIOUS PERMITS:**

**LPDES Permit No. LA0020150:** Issued: January 1, 2005  
Expired: December 31, 2009

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Monthly Avg.</u>	<u>Weekly Avg.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	Continuous	Recorder
CBOD <sub>5</sub>				
May – December	10 mg/l	15 mg/l	2/month	Grab
January – April	20 mg/l	30 mg/l	2/month	Grab
TSS				
May – December	15 mg/l	23 mg/l	2/month	Grab
January – April	20 mg/l	30 mg/l	2/month	Grab
Ammonia-Nitrogen				
May – December	5 mg/l	10 mg/l	2/month	Grab
January – April	10 mg/l	20 mg/l	2/month	Grab
Dissolved				
Fecal Coliform Colonies	200	400	2/month	Grab
pH	6.0 (min)	9.0 (max)	2/month	Grab

The permit contains pollution prevention language.

**XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:****A) Inspections**

A review of the files indicates the following inspection was performed during the period beginning December 2007 and ending December 2009 for this facility.

Date: December 10, 2007

Inspector: LDEQ

Findings and/or Violations:

1. The facility is an oxidation pond and clarifier with a design capacity of 0.5 MGD.
2. The monthly DMR's were reviewed for a timeframe of October 1, 2006 through September 30, 2007, during which a total of 11 permit limit excursions were noted for Ammonia-Nitrogen.
3. The causes of the excursions were plant upsets.

## Statement of Basis

LA0020150; AI 31094; PER20100001

Page 7

4. The corrective actions included implementing extra maintenance or operation procedures, and increasing chlorination of the discharge.
5. Flow calculation revealed an error of +0.32 %.
6. Facility had one operational aerator (one of six).
7. At the time, facility was replacing the support structures on the five aerators which are not in use.

**B) Compliance and/or Administrative Orders**

A review of the files indicates that no recent enforcement actions have been administered against this facility.

**C) DMR Review**

A review of the discharge monitoring reports for the period beginning December 2007 through December 2009 has revealed the following violations:

Parameter	Outfall	Period of Excursion	Permit Limit	Reported Quantity
NH <sub>3</sub> -N (Monthly Avg.)	001	December 2007	21 lbs/day	27 lbs/day
NH <sub>3</sub> -N (Monthly Avg.)			5 mg/l	12.7 mg/l
NH <sub>3</sub> -N (Weekly Avg.)			10 mg/l	14.5 mg/l
NH <sub>3</sub> -N (Monthly Avg.)	001	August 2008	5 mg/l	7.9 mg/l
NH <sub>3</sub> -N (Weekly Avg.)			10 mg/l	13.3 mg/l
NH <sub>3</sub> -N (Monthly Avg.)	001	October 2008	5 mg/l	7.6 mg/l
NH <sub>3</sub> -N (Monthly Avg.)	001	November 2008	5 mg/l	7.5 mg/l
NH <sub>3</sub> -N (Monthly Avg.)	001	June 2009	21 lbs/day	27 lbs/day
NH <sub>3</sub> -N (Monthly Avg.)			5 mg/l	11.3 mg/l
NH <sub>3</sub> -N (Weekly Avg.)			10 mg/l	12.5 mg/l
NH <sub>3</sub> -N (Monthly Avg.)	001	July 2009	5 mg/l	7.6 mg/l
NH <sub>3</sub> -N (Weekly Avg.)			10 mg/l	13.0 mg/l
NH <sub>3</sub> -N (Monthly Avg.)	001	August 2009	5 mg/l	8.5 mg/l
NH <sub>3</sub> -N (Monthly Avg.)	001	November 2009	21 lbs/day	23 lbs/day
NH <sub>3</sub> -N (Monthly Avg.)	001	December 2009	21 lbs/day	25 lbs/day
NH <sub>3</sub> -N (Monthly Avg.)			5 mg/l	10.5 mg/l
NH <sub>3</sub> -N (Weekly Avg.)			10 mg/l	11.2 mg/l

\*\* Due to the high number of reporting issues noted above, the facility was referred to the Enforcement Division on April 12, 2010.

**XII. ADDITIONAL INFORMATION:****Reopener Clause**

This permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(C) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act or more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs, if the effluent standard, limitations, water quality studies or TMDL's so issued or approved:

- a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
- b) Controls any pollutant not limited in the permit; or

## Statement of Basis

LA0020150; AI 31094; PER20100001

Page 8

- c) Requires reassessment due to change in 303(d) status of waterbody; or
- d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

**Mass Loading Calculations**

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.50 MGD.

Effluent loadings are calculated using the following example:

$$\text{BOD: } 8.34 \text{ lb/gal} \times 0.50 \text{ MGD} \times 10 \text{ mg/l} = 42 \text{ lbs/day}$$

**Monitoring Frequency Requirements**

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 0.10 and 0.50 MGD.

**Effluent Characteristics****Monitoring Requirements**

	<b><u>Measurement</u></b>	<b><u>Sample</u></b>
	<b><u>Frequency</u></b>	<b><u>Type</u></b>
Flow	Continuous	Recorder
CBOD <sub>5</sub>	2/month	Grab
Total Suspended Solids	2/month	Grab
Ammonia-Nitrogen	2/month	Grab
Dissolved Oxygen	2/month	Grab
Fecal Coliform Bacteria	2/month	Grab
pH	2/month	Grab

**Pretreatment Requirements**

Based upon consultation with LDEQ pretreatment personnel, general pretreatment language will be used due to the lack of either an approved or required pretreatment program.

**Pollution Prevention Requirements**

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.

The audit evaluation period is as follows:

<b>Audit Period Begins</b>	<b>Audit Period Ends</b>	<b>Audit Report Completion Date</b>
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date



Statement of Basis

LA0020150; AI 31094; PER20100001

Page 9

**XIII. TENTATIVE DETERMINATION:**

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

**XIV. REFERENCES:**

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2009.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 2006.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2009.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2009.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, City of Carencro, Post Road Wastewater Treatment Plant, January 25, 2010.